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REMARKS

Applicants wish to thank the Examiner for considering the present application. In the Final Office Action dated December 30, 2003, claims 1-23 are pending in the application. Applicants have added no new matter. Applicants respectfully request the Examiner for reconsideration. The allowability of claim 23 is acknowledged.

Claims 1, 3-8, 10, 11, 12, and 14-19 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Chang* (6,338,615) in further view of *Wissinger* (5,475,520) in further view of *Martinez* (5,584,046). Applicants respectfully traverse.

Claim 1 is directed to a method for rapid acquisition of a subscriber that defines a coverage area as an arrangement of a plurality of cells wherein one of the plurality of cells includes a specific subscriber. The next step includes defining a partition of cell clusters. One of the cell clusters includes one of the plurality of cells that includes the specific subscriber. A beam is then formed that corresponds to the area of one of the cell clusters. Claim 1 has been amended to clarify that the beam is then sequentially scanned to each of the cell clusters until the one of the cell clusters that includes the specific subscriber is identified. That is, only one cell cluster at a time is scanned. The partitioning of the cells into progressively smaller cell clusters and zooming and scanning a beam to the progressively smaller clusters is performed until a location of the specific subscriber cell is determined. The partitioning, zooming and scanning features are performed until the location of the specific subscriber is determined. This method is a significant improvement over the raster-type scanning performed in Figure 1 of the present application.

The Examiner rejects claim 1 with respect to the *Chang* reference and the *Wissinger* reference. The Examiner acknowledges on page 2 of the Office Action that the *Chang* reference does not specifically teach forming cell clusters and forming a beam that corresponds to an area of one of the cell clusters. The *Wissinger* reference is illustrated for showing these concepts except "sequentially scanning" for which the

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Martinez reference is provided. The *Wissinger* reference is best understood by looking at Fig. 8. In Fig. 8 an acquisition process is illustrated. This is described beginning in Col. 5, lines 16-57. As can be seen, four beams are used to cover an area. The beam with the transceiver 13 located therein is narrowed to four more beams. The four beams are then identified again and further narrowed. However, in each of the figures, four beams are formed at one time and are narrowed to four smaller beams, which in turn are narrowed to four smaller beams. Thus, the step of sequentially scanning the beam to each of the cell clusters until the one of the cell clusters that includes a specific subscriber is identified is not taught or suggested in the *Wissinger* reference.

The *Martinez* reference is set forth for teaching sequential scanning (Col. 4, lines 11-15). Applicants agree that the *Martinez* reference does illustrate sequential scanning as shown in Fig. 2 and as set forth in the passage. However, what is not shown is sequential scanning of a beam. That is, the beam that is used to sequentially scan corresponds to an area of one of the cell clusters that are a grouping of cells. What is shown in the *Martinez* reference is that a beam is sequentially scanned that is the size of one of the cells. Thus, none of the three references sequentially scans the beam to each of the cell clusters until one of the cell clusters that includes a specific subscriber is identified. The *Martinez* reference also is believed to not be properly combinable with the *Wissinger* reference in that the *Martinez* reference is not trying to identify a location of a specific subscriber. Rather, the *Martinez* reference describes a way to provide spectrum sharing between satellites in terrestrial communication services.

With respect to claim 8, claim 8 has been amended to correspond more directly to claim 1. Applicants therefore believe that claim 8 is also allowable for the same reason set forth above.

Claim 12 is similar to claim 1 in that sequentially scanning the beam to each of the cell clusters until one of the cell clusters that includes a specific subscriber is identified.

However, claim 12 also sets forth further limitations in addition to those of claim 1. Applicants believe that claim 1 is allowable for at least the reasons set forth in claim 1.

Claim 15 is also believed to be allowable for the same reasons set forth with respect to claim 1.

Claim 19 is also believed to be allowable for the similar reason to that of claim 1. Claim 19 sets forth partitioning the cells into progressively smaller clusters and zooming and sequentially scanning a beam to the progressively smaller clusters until a location of the specific subscriber cell is determined. As described above, the *Wissinger* reference uses four beams which are divided again into four beams which are again divided into four beams to narrow the search. Sequentially scanning is not shown in *Wissinger* as described above and as acknowledged by the Examiner.

Claims 2 and 13 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Chang* and *Wissinger* and *Martinez* in further view of *Diekelman*. Claim 2 is believed to be allowable for the same reasons set forth above since the *Diekelman* reference fails to teach or suggest the missing elements of claim 1 described above.

Claim 13 is dependent upon claim 12. Applicants respectfully request the Examiner for a reconsideration of claims 2 and 13.

Claims 8, 10, and 11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Chang* in view of *Wissinger* in view of *Lo* and in further view of *Martinez*. Applicants respectfully traverse.

The *Lo* reference is used for teaching a ground station having a beamformer. Applicants agree that the *Lo* reference teaches that the beamformer may be either on the ground or on the satellite as recited in Col. 3, lines 19 and 20. However, the specific cell clustering aspect of the invention as recited in claim 8 is not taught or suggested.

Claims 10 and 11 are further limitations of claim 8 and are believed to be allowable for the same reasons set forth above.
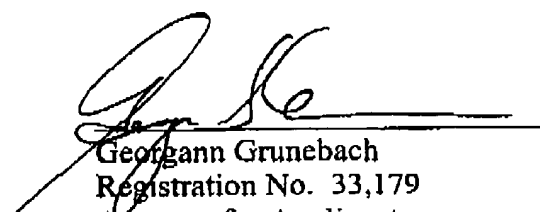
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Claim 9 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Chang, Wissinger, Martinez* and *Lo* and in further view of *Diekelman*. Applicants respectfully submit that the combination of the *Chang* reference and the *Wissinger* reference does not teach or suggest the cell clustering as recited in the present application. Applicants therefore respectfully request the Examiner for reconsideration of the rejection of claim 9 as well.

Claims 20-22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Chang et al., Wissinger* and *Martinez* in further view of *Diekelman*. As mentioned above, the combination of the *Chang* and *Wissinger* references does not teach or suggest the cell clustering as recited in the present invention. Also, *Diekelman* does not teach these missing limitations. Applicants respectfully request the Examiner for reconsideration of this rejection as well.

In light of the above amendments and remarks, Applicants submit that all rejections are now overcome. The application is now in condition for allowance and expeditious notice thereof is earnestly solicited. Should the Examiner have any questions or comments, which would place the application in better condition for allowance, he is respectfully requested to call the undersigned attorney.

Respectfully submitted,

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